

REMARKS

The Office Action dated July 27, 2007 has been carefully considered. Claims 1 and 2 have been amended. Claims 1-3 are in this application. The specification was objected to as informal at page 4, line 3 states "wings 13" however the wings were previously referred to as reference number 12 and reference number 13 was previously used for the screw. The specification has been amended to clarify the correct reference numeral for wing 12.

The claims were rejected under 35 U.S.C. § 112 as indefinite. Claim 1 has been amended to provide antecedent basis for the recesses. Claim 1 has been amended to more clearly define the present invention. Support for the amendment to claim 1 is found throughout the specification and in particular on page 4, lines 11-13. No new matter has been entered.

The previously presented claims were rejected under 35 U.S.C. § 103 as obvious in view of U.S. Patent No. 3,471,889 to Mikkelsen in combination with U.S. Patent No. 3,839,763 to Gould. Applicant submits that the teachings of these references do not teach or suggest the invention defined by the present claims.

Mikkelsen discloses a brush holder for sweepers including a hollow tubular holder means providing radially extending equally spaced hollow projections. The projections have parallel flat sides and flat end bearing faces. The end bearing faces engaging with and supporting brush rings of a roller brush.

In contrast to the invention defined by the present claims, Mikkelsen does not teach or suggest washing threads bent at a middle portion thereof, wherein the bent portions are fixed by close contact between adjacent rings. Rather, Mikkelsen disclose a brush ring formed having an inner diameter which contacts and a flat end bearing face. Further, Mikkelsen does not teach or suggest that the bent portions of the washing threads are inserted in recesses formed at a circumference of the core. Rather, Mikkelsen teaches away from the present invention by teaching that the brush ring contacts a flat end bearing face and does not teach or suggest washing threads extending in a recess of the core. Accordingly, the invention defined by the present claims is not obvious in view of Mikkelsen.

Gould teaches a cylindrical sweeper brush assembly including circular brush elements mounted on the core. Each brush element includes a split circular channel 12. Bristles 18 are

bent in the middle and anchored in the channel with a cable above the bent portion of the bristles and crimping channel side walls 14 towards each other. A coupling element is welded to the side wall of the channel on either side of the split.

In contrast to the invention defined by the present claims, Gould does not teach or suggest washing threads bent at a middle portion thereof, wherein the bent portions are fixed by close contact between adjacent rings. Further, Gould does not teach or suggest that the bent portions of the washing threads are inserted in recesses formed at a circumference of the core. Rather, Gould teaches coupling of threads using a cable bundling the threads and thereafter crimping the channel. However, there is no teaching or suggestion in Gould of washing threads fixed by close contact of adjacent rings. Instead, Gould teaches a cumbersome fixing arrangement requiring crimping of the channel. As described on page 5, lines 21-28, the present invention provides uniform distribution of washing threads along the circumferential direction which are densely disposed due to the close contact of the fixing rings. Accordingly, the threads of the present invention are not separated from the core. In contrast, Gould achieves attachment of threads by a cable and crimping arrangement without any contact of threads with adjacent fixing rings, as defined by the present invention.

Claims 3 was rejected under 35 U.S.C. § 103 as obvious in view of Mikkelsen and Gould in combination with U.S. Patent No. 4,815,452 to Hundebol.

Hundebol discloses a method for producing a grinding or polishing disc by providing a rectangular sheet of abrasive material with segments formed by slits from the outside toward the center. The sheet is glued together to form a closed ring. Rings can be dispersed between retaining discs on a rotating spindle.

In contrast to the invention defined by the present claims, Hundebol does not teach or suggest washing threads bent at a middle portion thereof, wherein the bent portions are fixed by close contact between adjacent rings. In addition, Hundebol does not teach or suggest that the bent portions of the washing threads are inserted in recesses formed at a circumference of the core. In Hundebol, the discs extend outwardly therefrom but are not bent and retained by a disc of any kind. Accordingly, Hundebol does not cure the deficiencies of Mikkelsen and Gould

described above and the invention defined by the present claims is not obvious in view of the combination with Mikkelsen, Gould and Hundebol.

In view of the foregoing, Applicants submit that all pending claims are in condition for allowance and request that all claims be allowed. The Examiner is invited to contact the undersigned should he believe that this would expedite prosecution of this application. It is believed that no fee is required. The Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 13-2165.

Respectfully submitted,

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